



SDMS Doc ID 2014605



## Tests sow new questions

**Preliminary study looks at lettuce grown with perchlorate-laced water; experts now want to research Inland lettuce irrigated by Colorado River**

12/21/2002

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THE PRESS-ENTERPRISE

Some federal regulators and environmentalists worry that lettuce and other vegetables irrigated with water from the Colorado River may be carrying a component of rocket fuel from farm fields to grocery stores.

Preliminary research has shown that lettuce seedlings grown in greenhouses with perchlorate-tainted water can contain a thousand times more perchlorate than the water.

Scientists say they need to test river-irrigated lettuce crops in Riverside County, the Imperial Valley and western Arizona to determine if the produce contains perchlorate and, if so, how much.



Kurt Miller/The Press-Enterprise  
Workers pick a lettuce crop grown with irrigated water from the Colorado River near Highway 86 in Coachella. Scientists want to test river-irrigated produce to see whether it contains unhealthy amounts of perchlorate.

Water from the river irrigates about 90 percent of the nation's winter lettuce.

The Colorado River has been polluted by a former perchlorate manufacturing plant near Las Vegas. The plant supplied the chemical for Cold War-era weapons and for space exploration, among other uses. Perchlorate can impair thyroid function and harm developing fetuses, federal officials say.

Charles Sanchez, a University of Arizona agricultural professor who is studying the issue, said he believes the lettuce grown with river water is safe.

The greenhouse lettuce can't be compared to field lettuce irrigated with Colorado River water, he said. "I believe it is a benign issue."

Contamination levels in the river water flowing into Southern California are 5 to 10 parts per billion. The state is proposing a

drinking-water health goal between 2 and 6 parts per billion.

A coalition of agencies that included the U.S. Environmental Protection Agency and the military agreed in 2000 that a study of river-irrigated crops was a top priority, according to an Air Force memorandum.

The Department of Defense has since reneged on funding, even after developing a protocol for such a study, said Annie Jarabek, a special assistant to the EPA's National Center for Environmental

Assessment in North Carolina.

"It needed to get done, and the DOD said they were going to do it, and we took them for their word," said Jarabek, who is overseeing the EPA's assessment of perchlorate health risks.

The Air Force's Health Risk Assessment Branch at Brooks Air Force Base in Texas was to oversee the follow-up lettuce research, but the branch has no money to do it.

"There isn't any money because it hasn't come down from command," said Nancy Berry, a budget analyst for the branch.

Air Force officials more familiar with the issue could not be reached Thursday or Friday.

### **A call for action**

On Friday, a Washington, D.C.-based environmental group called for the U.S. Food and Drug Administration to test lettuce in grocery stores.

"Everything is telling us it (perchlorate) has to be in the lettuce," said Richard Wile, a spokesman for the Environmental Working Group. "But we can't say a thing until we get hard data."

Ralphs and Food 4 Less spokesman Terry O'Neill said the store uses a testing service to monitor produce for pesticides and other chemicals. The company is not aware of any problems with Colorado River water, he said.

Representatives from Von's and Stater Bros. could not be reached for comment. An Albertsons spokeswoman said she could not comment at this time.

Wile said he was alarmed by tests on crops grown in perchlorate-tainted well water at the San Bernardino-based Lucky Farms.

Renee Sharp, an analyst for the environmental group, said the tests in 1997 showed perchlorate levels in "leafy vegetables" that were 65 times higher than those in the well water.

"If a pregnant woman ate lettuce with those levels, without question it would put the fetus at risk," Wile said.

Lucky Farms owners took the test results to Lockheed Martin Corp. The company is funding the cleanup of underground perchlorate contamination attributed to the former Lockheed Propulsion Co. facility in Mentone, said Gail Rymer, a Lockheed Martin spokeswoman.

The company doesn't feel the tests were valid, Rymer said.

Lockheed checked with experts and state officials and concluded that no accurate testing for perchlorate could be done on vegetables, she said.

A woman who answered the phone at Lucky Farms said the owners could not comment until they reviewed the information released by the environmental group.

### **The greenhouse tests**

The EPA, funded by the Air Force, in 2000 tested leafy plants for perchlorate.

Researcher Sridhar Susarla grew lettuce and mustard seedlings in an Athens, Ga., greenhouse using water he spiked with perchlorate.

The leaves turned yellow, he said, but beyond that, the plants absorbed and concentrated perchlorate.

"It basically magnified in the lettuce leaf," said Susarla, now a research engineer for the University of Georgia's Department of Agricultural and Biological Engineering. "We showed a magnification by a thousand times."

He stressed that his work wasn't definitive. He used water with perchlorate concentrations many times higher than those in the Colorado River and in Inland wells. He also found the perchlorate levels diminished as the plants aged.

Follow-up research wasn't funded. "We never had access to the lettuce heads irrigated with the Colorado River water," Susarla said.

Would he eat lettuce irrigated with Colorado River water? No, he said.

Sanchez, a professor of soil, water and environmental science, said no one should jump to a conclusion that the lettuce might be harmful.

The perchlorate molecules must compete with other, much higher concentrations of salts when plants absorb the river water. Much of the perchlorate won't be taken up, he said.

Sanchez is working on a study funded by the Arizona Iceberg Lettuce Research Council to see how much perchlorate is in the river-irrigated lettuce. About 100 heads are being tested.

"I expect to have data by late spring," Sanchez said.

Staff writer Jack Katzanek contributed to this report.

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